

AP20 Rec'd PCT/PTO 01 SEP 2006

## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

**In re application of:** Roberto Di Santo et al.**Application No.:** To be assigned**Filed:** Herewith**Confirmation No.:** To be assigned**For:** QUINOLIN-4-ONES AS INHIBITORS OF RETROVIRAL INTEGRASE FOR THE TREATMENT OF HIV, AIDS AND AIDS RELATED COMPLEX (ARC)**Examiner:** To be assigned**Art Unit:** To be assigned**Attorney Reference No.:** 4239-64846-04**CERTIFICATE OF EXPRESS MAILING**

I hereby certify that this paper and the documents referred to as being attached or enclosed herewith are being deposited with the United States Postal Service as Express Mail Label No. EV668294658US in an envelope addressed to: MAIL STOP PCT, COMMISSIONER FOR PATENTS, P.O. BOX 1450, ALEXANDRIA, VA 22313-1450 on the date shown below.

Attorney or Agent  
for Applicant(s)Date Mailed September 1, 2006

MAIL STOP PCT  
COMMISSIONER FOR PATENTS  
P.O. BOX 1450  
ALEXANDRIA, VA 22313-1450

**INFORMATION DISCLOSURE STATEMENT**  
**PURSUANT TO 37 C.F.R. § 1.97(b)(2)**

Listed on the accompanying form PTO-1449 and enclosed herewith are several English-language and/or non-English-language documents. Applicants respectfully request that these documents be listed as references cited on the issued patent.

Applicants filed this Information Disclosure Statement (“IDS”) within three months of the date of entry of the national stage as set forth in § 1.491 in an international application. As a result, no fee should be required to file this IDS. However, if the Patent Office determines that a fee is required for Applicants to file this IDS, please charge any such fees, or credit overpayment, to Deposit Account No. 02-4550. A **duplicate** copy of this IDS is enclosed.

10/591679

PATENT

WR:jam 09/1/06 4239-64846-04 574588 E-187-2003/0-US-03

AP20 Rec'd PCT/PTO 01 SEP 2006

The filing of this IDS shall not be construed to be an admission that the information cited in the statement is, or is considered to be, prior art or otherwise material to patentability as defined in 37 C.F.R. §1.56.

Respectfully submitted,

KLARQUIST SPARKMAN, LLP

By Wayne W. Rupert  
Wayne W. Rupert  
Registration No. 34,420

One World Trade Center, Suite 1600  
121 S.W. Salmon Street  
Portland, Oregon 97204  
Telephone: (503) 226-7391  
Facsimile: (503) 228-9446

AP20 Rec'd PCT/PTO 01 SEP 2006

<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>		Attorney Docket Number	4239-64846-04
		Application Number	107591679 To be assigned
		Filing Date	Herewith
		First Named Inventor	Roberto DiSanto
		Art Unit	To be assigned
		Examiner Name	To be assigned

**U.S. PATENT DOCUMENTS**

Examiner's Initials*	Cite No. (optional)	Number	Publication Date	Name of Applicant or Patentee
		4,386,092	31 May 1983	Oe et al.
		5,217,972	08 June 1993	Grohe et al.
		5,519,016	21 May 1996	Kimura et al.

**FOREIGN PATENT DOCUMENTS**

Examiner's Initials*	Cite No. (optional)	Country	Number	Publication Date	Name of Applicant or Patentee
		Europe	EP 0 8780194 A1	18 Nov 1998	Sankyo Company Limited
		WIPO/PCT	WO 99/50245	07 Oct 1999	Shionogi & Co., Ltd.
		WIPO/PCT	WO 99/62513	09 Dec 1999	Merck & Co., Inc., Tularik, Inc.
		WIPO/PCT	WO 99/62520	09 Dec 1999	Merck & Co., Inc., Tularik, Inc.
		WIPO/PCT	WO 99/62897	09 Dec 1999	Merck & Co., Inc.
		WIPO/PCT	WO 00/06529	10 Feb 2000	Instituto di Ricerche di Biologia Molecolare P Angeletti S.P.A.
		WIPO/PCT	WO 01/00578 A1	04 Jan 2001	Merck & Co., Inc., Tularik, Inc.
		WIPO/PCT	WO 01/98248 A2	27 Dec 2001	Bristol-Myers Squibb Company

**FOREIGN PATENT DOCUMENTS**

Examiner's Initials*	Cite No. (optional)	Country	Number	Publication Date	Name of Applicant or Patentee

EXAMINER SIGNATURE:	DATE CONSIDERED:
------------------------	---------------------

\* Examiner: Initial if reference considered, whether or not in conformance with MPEP 609. Draw line through cite if not in conformance and not considered. Include copy of this form with next communication to applicant.

<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>				Attorney Docket Number	4239-64846-04 <b>187591679</b>
				Application Number	To be assigned
				Filing Date	Herewith
				First Named Inventor	Roberto DiSanto
				Art Unit	To be assigned
				Examiner Name	To be assigned
	WIPO/PCT	WO 03/049695 A2	19 June 2003	The Government of the United States of America as represented by the Secretary, Department of Health and Human Services	
	WIPO/PCT	WO 2004/046115 A1	03 June 2004	Japan Tobacco Inc.	
<b>Examiner's Initials*</b>	<b>Cite No. (optional)</b>	<b>OTHER DOCUMENTS</b>			
		Baba et al., "Potent and Selective Inhibition of Human Immunodeficiency Virus Type 1 Transcription by Piperazinyloxoquinoline Derivatives," <i>Antimicrobial Agents and Chemotherapy</i> 41(6):1250-1255, 1997			
		Baba et al., "Inhibition of Human Immunodeficiency Virus Type 1 Replication and Cytokine Production by Fluoroquinoline Derivatives," <i>Molecular Pharmacology</i> 53:1097-1103, 1998			
		De Clerq, "New developments in anti-HIV chemotherapy," <i>Pure Appl. Chem</i> 73(1):55-66, 2001			
		Espeseth et al., "HIV-1 integrase inhibitors that compete with the target DNA substrate define a unique strand transfer conformation for integrase," <i>PNAS</i> 97(21):11244-11249, 2000			
		Goldgur et al., "Structure of the HIV-1 integrase catalytic domain complexed with an inhibitor: A platform for antiviral drug design," <i>PNAS</i> 96(23):13040-13043, 1999			
		Grobler et al., "Diketo acid inhibitor mechanism and HIV-1 integrase: Implications for metal binding in the active side of phosphotransferase enzymes," <i>PNAS</i> 99(10):6661-6666, 2002			
<b>Examiner's Initials*</b>	<b>Cite No. (optional)</b>	<b>OTHER DOCUMENTS</b>			
		Hazuda et al., "Inhibitors of Strand Transfer that Prevent Integration and Inhibit HIV-1 Replication in Cells," <i>Science</i> 287:646-650, 2000			
		Marchand et al., "Structural Determinants for HIV-1 Integrase Inhibition by $\beta$ -Diketo Acids," <i>The Journal of Biological Chemistry</i> 277(15):12596-12603, 2002			

EXAMINER SIGNATURE:	DATE CONSIDERED:
<p>* Examiner: Initial if reference considered, whether or not in conformance with MPEP 609. Draw line through cite if not in conformance and not considered. Include copy of this form with next communication to applicant.</p>	

<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>		Attorney Docket Number	4239-64846-04 1091679
		Application Number	To be assigned
		Filing Date	Herewith
		First Named Inventor	Roberto DiSanto
		Art Unit	To be assigned
		Examiner Name	To be assigned
		Okamoto et al., "Inhibition of Human Immunodeficiency Virus Type 1 Replication by Combination of Transcription Inhibitor K-12 and Other Antiretroviral Agents in Acutely and Chronically Infected Cells," <i>Antimicrobial Agents and Chemotherapy</i> 43(3):492-497, 1999	
		Okamoto et al., "Inhibition of the RNA-Dependent Transactivation and Replication of Human Immunodeficiency Virus Type 1 by a Fluoroquinoline Derivative K-37," <i>Virology</i> 272:402-408, 2000	
		Pais et al., "Structure Activity of 3-Aryl-1,3-diketo-Containing Compounds as HIV-1 Integrase Inhibitors," <i>J. Med Chem.</i> 45:3184-3194, 2002	
		Wai et al., "4-Aryl-2,4-dioxobutanoic Acid Inhibitors of HIV-1 Integrase and Viral Replication in Cells," <i>Journal of Medical Chemistry</i> 43(26):4923-4926, 2000	
		Zhang et al., "Azido-Containing Aryl $\beta$ -Diketo Acid HIV-1 Integrase Inhibitors," <i>Bioorganic &amp; Medicinal Chemistry Letters</i> 13:1215-1219, 2003	

EXAMINER SIGNATURE:	DATE CONSIDERED:
* Examiner: Initial if reference considered, whether or not in conformance with MPEP 609. Draw line through cite if not in conformance and not considered. Include copy of this form with next communication to applicant.	